

CLAIMS

What is claimed is:

1. A system for physical location self awareness in network connected devices, said system comprising:
a location server acquiring locations of said devices from a real-time location system;
and
an agent operable to run on each of said devices, said agent querying said location server for a location of said device and storing location information for said device on said device.
2. The system of claim 1 wherein said location server maintains said locations of said devices in a database.
3. The system of claim 2 wherein said location server acquires said locations of said devices when said location server is established.
4. The system of claim 1 wherein said location server acquires said location from said real-time location system upon said agent querying said location server for a location of said device.
5. The system of claim 1 wherein said location server is an extension of said real-time location system.
6. The system of claim 1 wherein said agent is software executed by said device.
7. The system of claim 1 wherein said agent is a process incorporated into said device.
8. The system of claim 7 wherein said agent is incorporated into firmware of said device.
9. The system of claim 1 wherein said agent queries said location server on boot of said device.

10. The system of claim 1 wherein said agent periodically queries said location server.

11. The system of claim 1 wherein said agent stores said location of said device in memory of said device.

12. The system of claim 1 wherein said agent stores said location of said device in mass storage of said device.

13. The system of claim 1 further comprising said real-time location system comprising:

- a tag associated with each device to be tracked;
- a plurality of receivers, said receivers locating each of said tags; and
- a central database of locations of said tagged devices.

14. The system of claim 13 wherein said location server is an extension of said real-time location system.

15. The system of claim 13 wherein said location server comprises a duplicate of said central database.

16. The system of claim 1 wherein said location server pushes location information updates to devices when location data on said location server changes.

17. The system of claim 1 wherein said location information stored on said device is accessible by a user networked to said device.

18. The system of claim 17 wherein said location information is accessible by said user via a shell.

19. The system of claim 17 wherein said location information is accessible by said user via a simple network management protocol.

20. The system of claim 19 wherein said location information is stored in a simple network management protocol management information base variable.

21. The system of claim 20 wherein said variable is system information for the device.

22. The system of claim 1 further comprising a plurality of real-time location systems.

23. The system of claim 22 further comprising a location server associated with each of said real-time location systems and a hierarchical server for searching for a location of a device starting from a last known location server outward to a next closest location server.

24. A method for providing location self awareness in a network connected device, said method comprising:

establishing a location server for acquiring a location of said device from a real-time location system;

executing an agent on said device;

instructing, by said agent, said device to send a query to said location server for location information for said device; and

storing said location information for said device on said device.

25. The method of claim 24 wherein said executing occurs upon boot of said device.

26. The method of claim 24 wherein said instructing is repeated periodically.

27. The method of claim 24 wherein said location information is stored in memory of said device.

28. The method of claim 24 wherein said location information is stored in mass storage of said device.

29. The method of claim 24 wherein said location server acquires said device location from said real-time location system as a result of said query.

30. The method of claim 24 wherein said location server is established as an extension of said real-time location system.

31. The method of claim 24 wherein said establishing further comprises duplicating a central database of said real-time location system.

32. The method of claim 24 further comprising:
pushing, by said location server, location information updates to devices when location data on said location server changes.

33. The method of claim 32 wherein said location information updates are pushed only to devices for which location information has changed.

34. The method of claim 24 further comprising:
providing access to said stored location information via a network.

35. The method of claim 34 wherein said providing further comprises:
providing said access via a shell.

36. The method of claim 34 wherein said providing further comprises:
providing said access via a simple network management protocol.

37. The method of claim 24 wherein said storing comprises storing said location information as a simple network management protocol management information base variable.

38. The method of claim 37 wherein said variable is system information for said device.

39. A system for physical location self awareness in a network connected device across a domain of a plurality of related real-time location systems, said system comprising:
a plurality of location servers, each location server acquiring locations of devices under a real-time location system associated with said location server;
an agent operable to run on each of said devices, said agent on a device querying a most recent location server associated with said device for a location of said device and storing location information for said device on said device; and
a hierarchical server adapted to querying each of said location servers for a location of said devices if said nearest location server fails to return a location of said device.

40. The system of claim 39 wherein said hierarchical server queries a next closest location sever when said nearest location server fails to return a location of said device.

41. The system of claim 40 wherein said hierarchical server queries a further next closest location sever when said next closest location server fails to return a location of said device.

42. The system of claim 39 wherein a newly assigned location server pushes a location information update for a moved device.

43. The system of claim 42 wherein said location information update is pushed to a previous location server to which said moved device was assigned.

44. The system of claim 42 wherein said location information update is pushed to said moved device.

45. A method for physical location self awareness in network connected devices across a domain of a plurality of related real-time location systems, said method comprising:
establishing a plurality of location servers, each of said location servers acquiring locations of said devices under a real-time location system associated with said location server;
executing an agent on each of said devices;
instructing, by said agent, that an associated device send a query for location information of said device to a most recent location server associated with said device;
querying, by a hierarchical server, upon failure of said nearest location server to return a location of said device, each of said location servers for a location of said device; and
storing, by said agent, returned location information for said device on said device.

46. The method of claim 45 further comprising:
querying, by said hierarchical server, a next closest location sever when said nearest location server fails to return a location of said device.

47. The method of claim 46 further comprising:
querying, by said hierarchical server, a further next closest location sever when said next closest location server fails to return a location of said device.

48. The method of claim 45 further comprising:
pushing, by a newly assigned location server, a location information update for a moved device.

49. The method of claim 48 wherein said pushing is carried out in response to said device moving into said newly assigned location server's associated real-time locations system's area.

50. The method of claim 48 wherein said location information update is pushed to a previous location server to which said moved device was assigned.

51. The method of claim 48 wherein said location information update is pushed to said moved device.